

Claims

What is claimed is:

1. Artificial turf, comprising:
5 a substrate; and
 a plurality of fibers protruding from the substrate, wherein the fibers
include a chromogen.
- 10 2. The artificial turf of claim 1 wherein the chromogen is thermochromic.
3. The artificial turf of claim 1 wherein the chromogen is stress chromic.
4. The artificial turf of claim 1 wherein the chromogen is chemically chromic.
- 15 5. The artificial turf of claim 1 wherein the chromogen is coated on the surface of
the fibers.
6. The artificial turf of claim 1 wherein the chromogen is included within the core of
the fibers.
- 20 7. The artificial turf of claim 1 wherein the fibers are composed of the chromogen.
8. The artificial turf of claim 1 wherein the chromogen is encapsulated.
- 25 9. Artificial turf, comprising:
 a substrate; and

a plurality of fibers protruding from the substrate, wherein the fibers respond to an increase in temperature by changing from a first color to a second color, the first color and the second color being visually distinguishable.

- 5 10. Artificial turf, comprising:
 a substrate; and
 a plurality of fibers protruding from the substrate, wherein the fibers respond to an elastic elongation by changing from a first color to a second color, the first color and the second color being visually distinguishable.

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11. Artificial turf, comprising:
 a substrate; and
 a plurality of fibers protruding from the substrate, wherein the fibers respond to a change in chemical environment by changing from a first color to a second color, the first color and the second color being visually distinguishable.

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12. The artificial turf of claim 9, 10, or 11 wherein the change in color is substantially reversible.

- 20 13. The artificial turf of claim 1, further comprising indicia for determining the position of a golf ball.

14. The artificial turf of claim 1, further comprising indicia for marking the boundaries of a sports field.

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15. A color changing material, comprising:
 a substrate; and

a film that includes a chromogen, wherein the film responds to a change in environmental conditions by changing from a first color to a second color, the first and second color being visually distinguishable, the film being disposed on a surface of the substrate.

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16. The color changing material of claim 15, wherein the film changes from the first color to the second color along the path of a ball rolling on its surface.